

WHAT IS CLAIMED IS:

1. An apparatus for transferring data on a network comprising:

a switch comprising a primary component for switching the data through the switch;

a secondary component for switching the data through the switch if the primary component fails; and

a mechanism for counting the data that has been received, transmitted or dropped by the switch without including any redundancy in the counting of the data due to the primary component and secondary component both able to switch data through the switch.

2. An apparatus as described in Claim 1 wherein the counting mechanism counts data as ATM cells from the network which is an ATM network.

3. An apparatus as described in Claim 2 wherein the counting mechanism includes a cell recording module which combines cell counts calculated from the primary and secondary components.

4. An apparatus as described in Claim 3 wherein the module collects cell counts for each connection through the switch.

5. An apparatus as described in Claim 4 wherein the module counts cell counts from either the primary component or the secondary component depending upon which one is actually having the connection through the switch, otherwise known as an active component.

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6. An apparatus as described in Claim 5 wherein the primary component and the secondary component each have physical interfaces and a logical interface for both components that maintains a switchover count which counts whenever a physical component takes over the connection because the other component has failed, otherwise called a switchover event, and each physical interface counts the number of cells of the connection that have passed through it.

7. An apparatus as described in Claim 6 wherein the logical interface increases its switchover count whenever it receives a switchover event and clears cell counts on the active component.

8. An apparatus as described in Claim 7 wherein the module counts the cell counts of the logical interface on the active component for each connection in predetermined intervals.

9. An apparatus as described in Claim 8 wherein the module reviews the logical interface at each interval to determine if the component with which it is associated has its switchover count increased since a previous interval.

10. An apparatus as described in Claim 9 wherein the module counts cell counts from each physical interface to determine a total number of cells that has passed through the switch, unless the switchover count has increased since the previous interval, in which case the cell count from the previous interval is subtracted from the cell count from the logical interface.

11. A method for transferring ATM cells on a network comprising the steps of:

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switching the ATM cells with an ATM switch of the ATM network having a primary component for switching the cells and a secondary component for switching the cells if the primary component fails; and

counting the cells that have been received, transmitted or dropped by the switch without including any redundancy in the counting if the cells due to the primary component and secondary component both able to switch the cells through the switch.

12. A method as described in Claim 11 wherein the counting step includes the step of counting the cells with a cell recording module which combines cell counts from the primary and secondary components.

13. A method as described in Claim 12 wherein the counting step includes the step of counting cells with the module for each connection that passes through the switch.

14. A method as described in Claim 13 wherein the counting step includes the step of counting with the module from either the primary component or the secondary component depending on which one is actually having the connection through the switch, otherwise known as an active component.

15. A method as described in Claim 14 wherein the counting step includes the step of maintaining a switchover count in each logical interface of each component which maintains a switchover count which counts whenever the associated components takes over the connection because the other component has failed, otherwise called a switchover event, and counting with each logical interface the number of cells of the connection that has passed through it.

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16. A method as described in Claim 15 wherein the maintaining step includes the step of increasing by each logical interface its switchover count whenever it receives a switchover event and then clearing cell counts on the active component.

17. A method as described in Claim 16 wherein the counting step includes the step of counting the cell counts of each logical interface on the active component for each connection at predetermined intervals.

18. A method as described in Claim 17 wherein the counting step includes the step of reviewing each logical interface at each interval to determine if the component with which it is associated has its switchover count increased since a previous interval.

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